

Creating the Universe: A Study of Cosmos and Cognition

Judith S. Neulander
Indiana University

Folklorists have developed a variety of theories and techniques for studying different peoples' perceptions of cosmic and world order. Recent discoveries in the cognitive sciences now promise to deepen our understanding of processes that account for similarities and differences in these perceptions. Following this lead, it becomes possible for us to review the multiplicity of texts in which a multiplicity of gods have generated a multiplicity of worlds—our own among them—to discover human beings as Creators of the Universe—ourselves among them.

Upon careful reflection, there appear to be two principal ways that human beings bring order out of chaos. One, probably universal, is according to physical relationships in nature, such as fore-and-aft, the cardinal directions, center and periphery, beginning and end, etc. The other is distinctive, according to relationships found outside of nature, as set forth in distinct creation myths. Euro-Americans for instance, organize the plenitude according to a non-existent, but governing matrix of vertical scale, with *super-* on top, *sub-* on the bottom, and all else between in descending order from best to worst; supernal to infernal; good to evil; superior to inferior; "high" to "low." As noted by British sociologists (Stallybrass and White 1968:3-4):

The ranking of social classes is a particularly clear example of a much broader and more complex cultural process whereby the human body, psychic forms, geographical space and the social formation are all constructed within interrelating and dependent hierarchies of high and low. The high/low opposition in each of the four symbolic domains—psychic forms, the human body, geographical space and social order—is a fundamental basis to mechanisms of ordering and sense making in European cultures. Divisions and discriminations in

one domain are continually structured, legitimated and dissolved by reference to the vertical symbolic hierarchy which operates in the other three domainsIndeed, the oppositions, interpenetration and transgressions of high and low bear such an enormous weight of cultural organization that one marvels at the sheer labour of transcoding, displacement and partition involved in the elaborate networks of *super-* and *sub-* in our cultural history.

Historically, the Book of Genesis is not the first or the only cosmological blueprint of lofty and lowly oppositions, but it is the popular vehicle of transmission to which the "West," and areas under the cloak of its influence, have become heirs and trustees. The cognitive pattern is perseverative in Western thought, which to this day remains preoccupied with the fact and consequences of transitions, tensions, and transgressions between high and low. Admittedly, the first orderly division of Biblical *Tohu b'Vohu* (loosely translated as "chaos"), is temporal. That is, light is created, such that "...there was evening and there was morning, the first day" (Gen. 1:5). This designates that each 24-hour cycle begins with the evening, as now prevails on the Hebrew calendar. On the second day, however, the firmament of Heaven is created, first striating the infinitude on a vertical plane (Gen. 1:7,8):

And God made the firmament and divided the waters
which were under the firmament from the waters
which were above the firmament: and it was so.
And God called the firmament Heaven.

From this point on in the space-time continuum, everything in and under Heaven is created in descending order from sacred to profane. Juxtapositions of dominion and subjugation, over and under, above and below, lofty and lowly, form a vertical matrix on which hierarchical world order is established in Genesis, as in these Biblical commonplaces (my italics):

And God said, Let us make man in our image. . .and let them have *dominion over* the fish of the sea, and *over* the fowl of the air, and *over* the cattle, and *over* every creeping thing that creepeth upon the earth (Gen. 2:26).

. . .and God said unto them, Be fruitful and multiply, and replenish the earth, and *subdue* it. . .(Gen. 2:28).

. . .And the Lord God said unto the serpent, Because thou hast done this, thou art cursed *above* all cattle, and *above* every beast of the

field; *upon thy belly* shalt thou go, and *dust shalt thou eat* all the days of thy life (Gen. 4:14).

. . .Unto the woman he said. . .and thy desire shall be to thy husband, and he shall *rule over* thee (Gen. 4:16).

Not surprisingly, transgressions of high and low were commonplace in folk narratives of the ancient Levant. But surprisingly, issues brought to bear by such transgression still have currency in American Jewish folklife, as in nationwide use of birth amulets against the demon Lilith (Josephy 1986:175-176;180). In Near Eastern folk tradition, Lilith is the first female to inhabit Eden. She reveals her demonic nature by claiming equal gender status with Adam, and leaves Paradise when he rejects her line of reason. Thereafter she was/is believed to cause and steal nocturnal ejaculations in order to create demon children, and to engage in vampiral, or other potentially lethal attacks, on human newborns and parturient mothers. The variant below is from an eleventh century Midrash on Lilith by Ben Sira (Patai 1980:407-408):

When the Holy One, blessed be He, created Adam the first man single, He said: *It is not good for the man to be alone* (Gen. 2:18), and He created for him a woman from the earth like him, and called her Lilith. Instantly they began to quarrel. She said: "I shall not lie beneath," and he said: "I shall not lie beneath but above, for your place is beneath and mine above." She said to him: "Both of us are equal for both of us are of earth." And they did not listen to each other. When Lilith saw this, she uttered the Ineffable Name and flew off into the air of the world.

As the narrative indicates, the subject of folk preoccupation is with correct gender status, or more precisely, with the correct vertical order of gender status, as set forth in Genesis. Being a transgression against the social order, Lilith's claim is parlayed into a threat against communal propagation and survival, in folk imagination. But, whether or not the ancient transgression is related to modern fears, her status still remains lowly and threatening to some, as evidenced in the continued posting of anti-Lilith wall-amulets in American Jewish hospitals. But for others, it is precisely her gender transgression that has elevated her status to the point where she has become the most esteemed emblem of American Jewish feminism; the name Lilith, for example is the current title of a major American Jewish feminist periodical. As Stallybrass and White have suggested, virtually any status can change, or be renegotiated according to what becomes timely and regional, over time and across space. But the traditional vertical hierarchical ordering principal along which such

displacements and reversals are negotiated, remains in force. It follows that as believers or non-believers in our primal creation myth, we continue to bring order out of chaos as a prescribed form of *imitatio dei*, in what has become an institutionalized mode of sense-making.

Not all peoples cast vertical order over the vast homogeneity of space, however. The Brazilian Tupinamba, for instance, locate a sacred Otherworld to the East; the Venezuelan Yaruro ideate a sacred West. And of particular interest, the Pueblo of the American Southwest configure a vertical hierarchical cosmic scheme, but inverted to our own, with sacredness "below." It is true that in the Pueblo cosmos, the sky harbors a life-generating force in the sun, while celestial bodies and diverse weather conditions are personified in folktales and sacred text. But in Pueblo origin myth, no one is created on the earth's crust by a supernal force that establishes world order. Rather, the people emerge from three successive sacred realms, deep beneath the earth's surface. While there could hardly be a more "upwardly mobile" scenario to the Euro-American way of thinking, it is not at all clear that Ideal or Sacred are associated with "up," or with upward mobility, by the Pueblo. In fact, there is no evidence of striving for individual distinction and superior status within the Pueblo collective, a social ideal that is strikingly antithetical to our own. According to Paul Horgan's careful descriptions of traditional villages, Pueblo social formation seems just as inverse to our own, as is their vertical cosmic hierarchy (1953:54,59):

It was an organized life whose ruling ideas were order, moderation, unanimity. All ways were prescribed. . . .Example of such controls elsewhere suggested that they must come from a ruler, or a presiding head of state. . . .But the pueblo people had no ruler. . .

Since property was entirely for use and not for sale or trade within the pueblo, everybody lived upon the same scale. Their rooms were alike. Their holdings in food, clothing, furniture, were about the same. Living closely together, they interfered very little with their immediate neighbors, though within the family there was no privacy and no desire for any. Outbursts of feeling, emotion, violence, were bad form, and so was indulgence in authority for its own sake, instead of for the propriety it was meant to preserve. Nobody was supposed to stand out from everyone else in any connection.

But it is in the domain of geographical or geometrical space that antithesis is linked to primal myth with unmistakable clarity. The evidence is in Pueblo architecture, and the same is true of Euro-American architecture. In the typical Euro-American equivalent of the village—the suburb—houses are entered through doors in the sides; we socialize and share food at ground

level, but to retreat from the mundane world, to reveal ourselves most intimately, and to enter the realm of our dreams, we ascend. Our domed temples and steepled churches soar upward toward the imaginary spherical shell of the aeronautical ceiling, beyond which lies the supernal realm of "outer space." The traditional features of Pueblo architecture have been thoroughly documented by Nabokov and Easton in their study of Native American traditions (1989:passim). We learn from them that the traditional Pueblo dwelling is semi-subterranean, and is entered through the smoke hole in the roof. To come home then; to find physical and emotional intimacy, to retreat and to dream, the Pueblo descend. Traditional sacred space is defined by the subterranean *kiva*; when the community worships, it worships underground. In place of our domed ceilings, sky-scraping steeples and minarets, the center of the *kiva* reaches down to the spirit world through a floor vault, past the outer layer of the earth's crust, beyond which lies the sacred realm of "inner space." The inverted ordering principles of primal Pueblo myth, and primal Judeo-Christian-Muslim myth, are obvious in the antithetical manner by which Pueblo Americans and Euro-Americans cast geometrical order over both sacred, and domestic space. What the greater implications may be is subject to more vigorous research. But barring conflicting evidence, there is reason to claim that distinct primal myths shape the ordering principles of the people who carry them in tradition. While this observation is useful in recognizing the relationship between expressive behavior and perceptions of cosmic order, it begs the persistent question of how and why members of the same species can, and do, perceive different cosmic orders in the same universe.

According to current understandings in cognitive science, the human organism can only distinguish order from disorder through stimuli to the senses. Once received, these stimuli are subjected to cognitive processes that are only beginning to be understood. It is clear, however, that confusion results when the central nervous system (CNS) is unable to make perceptual closure; that is, to bring order out of chaos.

It is therefore important to consider that the plenitude and infinitude of the space-time continuum lie outside of human sensory perception, and are thus imperceptible. Since perception of the imperceptible is necessarily imaginary, it follows that any order drawn from imaginary ideations of the imperceptible is also imaginary. Yet we steadfastly claim to perceive the imperceptible cosmos, as historically evidenced in our Western cosmologies, including but not limited to the Zoroastrian Garooman, Greek Olympus, Roman Caelestis, Kaballist Eyn Sof, Judeo-Christian-Muslim Heaven, and desacralized Outer Space. Notably, all of these configurations fall equally heir to the same CNS limitations, and to the same compensatory cognitive strategies that are required to even think "cosmos." My contention is that we do so by nothing more mysterious—and I hasten

to add, nothing more efficient (or lowly, on our vertical hierarchical scale)—than ordinary imagination.

Research in figure-ground perception has long yielded evidence that human beings will perceive geometric forms in random formations of dots that do not represent geometric forms, for instance. Explanations of auditory events site recent findings in auditory perception (Handel 1990: *passim*), illustrating the same order-imposing phenomenon in cognitive strategies by which we make sense of sound. For example, if human beings hear a frequency of 100-300-400-500 hertz, the CNS will autonomically "hear" the missing 200 hertz, and the listener will be completely unaware that there was no 200 hertz to be heard. Logically, perception of the 200 hertz is therefore *extra*-sensory, because no sound accounts for what is heard—there is no 200 hertz stimulus to evoke auditory sensation of 200 hertz. It is also *meta*-physical, in that the sound of the 200 hertz is never produced in the physical world. But in less mysterious terms, the sound is simply imaginary.

What is striking about imagination in this autonomic context is that it brings order out of chaos when there is insufficient stimuli to otherwise allow cognitive closure. It is clearly an unconscious, involuntary reflex for sense-making, and is therefore a survival strategy, for without the sense-making that permits us to seek goals, we could not be purposeful. Even at the most elementary level, taking so much as a step forward without mortal consequence is entirely dependent on making correct sense of what lays directly ahead; a gaping abyss, an oncoming truck, a clear passage, a stairway, etc. To be faced with a field of infinite indeterminacy, or failed closures, invites a halting if not paralyzing ambivalence. When faced with infinite indeterminacy, the autonomic CNS evidently acts upon association with what is *most likely*, and correspondingly provides what is most algorithimically and metaphorically *like* whatever can best be expected to bring closure. The process, being unconscious, eliminates hesitation or paralysis, and thus permits the most efficient, economic and purposeful action. If this auxiliary perception sometimes fails to ensure the survival of an individual, it must nonetheless be a cognitive strategy that generally succeeds for survival of the species.

Differences and similarities in perceptions of the universe, to say nothing of reconstructions of sacred history, become less mysterious when we consider that similar variables, under similar conditions, tend to give rise to similar consequences—although not necessarily to the *same* consequences. Moreover, to the extent that variables and conditions can differ significantly, consequences can also differ significantly. Yet, for lack of scholarly inquiry, there is no hard evidence to suggest what variables or conditions account for algorithimic or metaphoric associations of

sacredness with "left," "right," "up," or "down." All that can be said with assurance is that in Western tradition, the sacred realm is generally perceived to be in the sky, with no further investigation of what association could have linked sacredness and/or morality to "up," with such strength of conviction.

Judging by the abundance of strict protocols directed at the ancient Mesopotamian sky, it was certainly the focus of dread as well as hope. In fact, we find this precise emotional paradox directed at the sky in Pickthall's translation of the Qu'ran (1959:183):

He it is who showeth you the lightning, a fear and hope, and raiseth the heavy clouds. (Surah xiii: The Thunder)

To some extent, evidence of the same dichotomy persists in the structure of Hebrew prayer service, which over its 3000 years of development, still retains a pattern of praise for the benevolence of Almighty power, along with petition for redemption from Its equal fearsomeness. Even in the form of the ancient *Shema*, a call to prayer rather than a full prayer service, the pattern appears in the context of the recitation with its accompanying benedictions. In the *Shema's* second long paragraph, the reference to devastating punishment for displeasing God "has mortified some modern rationalists," according to Garfiel (1958:88), such that "This section of the *Shema* has therefore been omitted from the Prayer Books of several large sections of Jewry." In fact, read with or without this passage, the structure of the *Shema* is intact, opening with reference to Creation (as with reverence for God in the roll of Creator); moving on with reference to Torah (as with reverence for God's Revelation to the people); and ending with reference to Moses (as with reverence for God in the roll of Redeemer). The tripartite focus on Creation-Revelation-Redemption, in that order, is the governing order of Hebrew prayer. Of particular importance, however, is the notion that the ancient focus on redemption reflects a dread of the Sacred which is so atypical in modernity that references to it are falling from tradition, as evidenced in the current fall from many Jewish Prayer Books. Hence, we can begin to understand that the gulf between Neolithic hope and dread represents an irreconcilable polarity, as between the absolute good of divine providence, and the absolute bad of divine privation. Therefore, we can see that the Neolithic sky evoked polarized emotions, or a paradoxical conflict in the human psyche, which may provide us with a clue as to how and why it was finally perceived as a sacred realm.

As a stimulus that evoked paradoxical response, it is noteworthy that the sky itself was a realm of paradox, ceaselessly generating both life-sustaining and life-threatening events in a continual display of binary oppositions like darkness and light (night and day); eclipse (night during the

day); scorching and chilling (summer and winter); fire and water (lightening and rain); flood and drought; calm and storm—ultimately, life and death, in the sky's direct climatic impact on survival.

Viewed this way, there is a clear isomorphic relationship between the infinite indeterminacy of the sky, and infinite indeterminacy itself, as realms of stimuli that are at once impossible to ignore, or bring to closure. Linkage of sky and paradox, as twin realms of "pure possibility," is by no means inevitable in Neolithic imagination. But it is possible. Thereby, one can make sense of the sky as the unique location of the miraculous; therefore the one place where creation of all paradox takes place, and where resolution of all paradox is possible. Such would be the power of Divine Insight, emanating from the locus where all was in fact sensibly made (and therefore makes sense), if only from this "higher," more privileged point of view. Schematically, the higher one goes, the greater one's proximity to the Ideal; to ultimate clarity, orderliness and Good. Conversely, the lower one descends, the greater one's distance from the lofty Ideal, and the greater one's proximity to the lowly non-Ideal; to ultimate disorderliness, confusion and Evil.

As a means to know the unknowable, the very polarity of an irreconcilable opposition may constitute a paradox that provides its own remedy. This is because polarity establishes parameters that we can conceive of, reducing the infinite to the finite, the indeterminate to something determinate. The Biblical striation of diffuse time, into the evening/morning opposition, is an example of such containment. Because the two points in time exist in binary opposition to each other, they form the boundaries of whatever lays between them, delineating a complete entity—in this case, the 24-hour cycle we call a "day." The points of time chosen, as generalize to the moments of losing or gaining daylight, are oppositions that actually occur in nature. Beyond associating certain natural events with the passage of time, proximity of events in time is also an important organizing strategy, as cited by Krech, et. al, in their presentation of experimental findings. They indicate that this may be particularly true in "ambiguous" situations, where there is insufficient stimuli for closure:

In a new situation or in an ambiguous one, our immediate perception of cause and effect is largely determined by the temporal coincidence of two events (1962:27).

Failure to recognize a cause-and-effect relationship, when life sustaining/life threatening events emanate from the sky, obviously impedes prediction and control of such events, and to some extent prevents adequate damage control. The dilemma translates directly into a realistic sense of helplessness and victimization. Logically, the advantage to prediction and

control of a seemingly climate-emanating realm, in an utterly climate-dependent age, cannot be overestimated. But since climatic events could not fail to occur in coincidence with some sort of human behavior, Krech permits us to assume that proximity in time between ancient behaviors and climatic events, strongly suggested a causal relationship between the two. Therefore, by making the temporal association, human action could be understood to influence that of the sacred realm, with all that this may imply about the development of ethics and taboos. Clearly, the notion of a causal link created an immediate means for prediction and control of the sacred realm, providing a field of action contained within the binary opposition of good/evil behavior, as associated with causation of good/bad weather. It is clear that just such temporal and metaphoric associations were indeed made, for if a causal link was not imagined, then we cannot account for the development of strict and careful protocols that are meant to affect the sacred realm, as we consistently find in rite, ritual and prayer.

Evidently, to bring cognitive closure we must distinguish the discrete from the continuous, or impose parameters of completeness upon continuums, as by designating polar opposites to form their boundaries. It seems that when such oppositions are found in the natural world, they are used as isomorphic models for all-inclusive categories in the supernatural realm, bringing the ineffable into descriptive terms for us. The phrase "from A-to-Z," as Schrempp suggests, is a commonplace that serves as an example of "the first and last elements from a system that is acknowledged as complete" (1992:xvi). Schrempp points out that Christ uses the alphabetical model to describe the all-inclusiveness of his own divinity, according to the Revelation of Saint John the Divine:

I am Alpha and Omega, the beginning and ending (1:8).

I am Alpha and Omega, the first and the last (1:11).

We should add that the cognitive strategy applied to this task uses metaphoric association between two sets of binary oppositions, which may be the hallmark of discourse that defines, delineates, or describes the otherwise ineffable. Mircea Eliade has noted that order is typically cast over chaos by division into two, but it should be noted that such a primary division must perforce create a binary opposition, as left must be opposed to right for instance, or above to below, or dark to light. With the notable exclusion of Genesis, Eliade cites numerous examples of "fragmentation of the unitary mass" (1965:114-15), variously described as the cosmic egg, the anthropocosmic giant, and the primordial androgyne—all of which, or whom, must be broken apart for the world and humanity to be born. But the imposition of binary opposition, as an imposition of cosmic order, is implicit in the division of evening from morning and all the dichotomies

that follow in Genesis. Subsequent sense-making of Biblical sense-making, as undertaken in Rabbinic literature, does not hesitate to bring further order by conceptualizing the sacred in metaphoric association with polarized boundaries that occur in the mundane world. Hence, Talmud discusses the waters that were separated into those "above" and those "below" according to a male/female model, and elaborates by making metaphoric association between geophysical fertilization and human copulation:

R. Levi said: "The Upper Waters are male and the Lower Waters female. What does it mean *Let the earth open* (Isa. 45:8)? Like unto this female who opens up for the male. . ." R. Aha taught in the name of Shim'on ben Gamliel: "Why is the early rain called *r'vi'a*? [Lit. *copulation*]. Because it copulates with the earth. (Y. Ber. 14a mid.).

Similarly, the division of the primordial androgyne into male and female is conceptualized in Rabbinic interpretation of the Biblical passage: "Male and female created he them, and blessed them, and called their name Adam on the day when they were created" (Gen. 5:2):

R. Yirm'ya ben El'azar said: "In the hour in which the Holy One, blessed be He, created Adam the first man, He created him as an androgyne. This is meant by what is written, *Male and female created He them and called their name Adam* (Gen. 5:2)."

R. Sh'muel bar Nahman said: "In the hour in which the Holy One, blessed be He, created Adam the first man, He created him with two visages, and then sawed him into two and made him two backs, a back here and a back there." (Gen. Rab. 8:1).

Therefore, it should not be surprising that so many gods bring order out of chaos by primordial divisions into binary opposites, and by metaphoric/algorithmic association between the diffuse and the bounded, since that is evidently the cognitive process by which human beings typically bring order out of chaos.

This process would seem to have bearing on what we call the poetics of myth, since it would be inordinately difficult to express such metaphoric associations, except in metaphoric terms. Since the mundane world is effable, as a function of mundane perception and vocabulary, then the Otherworld—by virtue of being Other—must be comprised of all that is ineffable, as a function of unconscious perceptual process and lack of descriptive vocabulary from the mundane lexicon. Thus, we cannot literally describe what Other is, but only what it is *like*. Moreover, we must use the mundane world as our referent, because it is the only referent we have. The discourse is therefore necessarily metaphor-reliant. In ancient pseudepigrapha

for instance, the Aramaic/Ethiopic Enoch carefully describes the Terrible/Wonderful realm of celestial paradox in consciously paradoxical, or antithetical terms that are so powerful they remain in vernacular use, although they are rarely formally taught—terms like: "fiery seas," and "blinding light" (Sparks 1984:passim). Similarly, the anthropomorphic seraphim and sphinx-forms of antiquity provide concrete images of such abstractions. In material expression, highly discrete species of This World are combined into one being, as in the commonplace of a winged beast with human head, aptly representing the realm of pure possibility, or the infinite miraculousness of the Otherworld. Hence, it is no mere coincidence that we find such marvelous beings used to mark temples, tombs and other junctures with sacred space. As the ancient poet signified the realm of paradox with verbal paradoxes, the artist simply created material analogues for it.

In his discussion of the Tukano Indian cosmos, Geraldo Reichel-Dolmatoff gives an example of the associative process, as used in a conversation meant to clarify the obscure (1968:53):

We continue talking, seeking new contexts, and the informant says: "*Tulari* is the forest, the mammals; *boga* is the river, the fish." And suddenly the definition becomes clearly formulated by the informant: "*Tulari* is masculine energy, and *boga* is feminine energy. The two together—*tulari boga* and *uhuri boga*—are fertilization and fecundity: they are the great current that circulates."

Reichel-Dolmatoff goes on to explain (1968:54):

The larger circuit of fertilization-fecundity, of the attraction of two fundamental complementary elements, embraces all the biosphere, all the Cosmos, in a grand synthesis of the structure of the universe. The structure is hyperbiological in that it derives from the model of sexual physiology an endless number of associations, images and symbols that withdraws farther and farther from physical facts until it constitutes a dynamic philosophy of equilibrium.

From his example we can see how metaphor lifts logic into the realm of analogic, in mythopoeic thought, imagery, and narrative. A certain amount of reality is lost, but what is *gained*, is systemization and order. It would be wrong, however, to assume that the conscious process by which the poetics of myth are crafted, or the necessarily autonomic, unconscious mythopoeic mode by which cosmic order is imagined, are "primitive," or are survivals of an archaic epoch in Western tradition. Even Albert Einstein, the foremost scientific thinker of our age, and the cartographer of our desacralized cosmos, had no lack of metaphors that informed his idea of the universe. Locomotives were frequent, but there were many others, including

but not limited to: a soap bubble; a little boy playing marbles on an uneven surface; an expanding spotted balloon on which the spots do not expand; and my all-time personal favorite, a roving interstellar gunman shooting bullets through a cosmic elevator (Barnett 1950:93,50,97,84). Nor is he all alone in his modern mythopoeic constructs. As Einstein's biographer points out, an event like the collision of two electrons is real, but within the frame of modern physics, the original theory could not precisely define what the particles in this encounter really are (Barnett 1950:114). In fact, a quantifiable negative charge outside the nucleus of the atom infers an entity that is symbolized in two ways: by a configuration of what collided, and the name "electron." Amber, a fossil resin, was called "electron" by the Greeks, in association with "elektor," the shining sun. It is an apt association, since amber glows, or is quickly electrified when friction is applied. Hypothetically, were the atomic particle to reveal that its charge is unrelated to electrification, or friction, future scholars might easily indict our conscious poetic association to amber as a "disease" of language, evidencing our "animistic" thought patterns just as Homer is so often indicted for referring to sunrises as "rosy fingered" dawns.

To assume wholesale unconsciousness in antiquity, or that all unconscious associations are "animistic" artifacts of antiquity, is itself a mistaken belief. The error is forgivable because it is due to insufficient stimuli to the CNS about its own unconscious function. Perceptual awareness of unconscious or autonomic process is by definition uninformed—which is what the word unconscious is named after. Filling the gaps must call for autonomic, auxiliary CNS service, to bring closure. This is normal intellectual behavior, since full CNS service is there to be fully subscribed to, providing enough algorithimically and metaphorically correct closures to ensure survival. The irony is, no matter how much we increase our learning, we can only become increasingly aware of imagination's failure. Imagination's record of triumph must be rarely perceived or appreciated, because it will never be contradicted by anything we learn, after we have imagined that we already know what "is."

The association of metaphoric wordplay with mistaken belief, and the indictment of "animism" as a "lower" cognitive process, is Edward Tylor's. Considering metaphor to be a literal expression of a perceptual mistake, and considering the frequency with which myth is dotted by metaphor, Tylor's indictment meets his own rigorous scientific method of "continued reference of point after point to the test of actual example" (Dorson 1986:93). Where his reasoning fails, is according to the greater scheme of things in Western hierarchical thought, whereby savage mentality must be more lowly than civilized mentality, and the savage "scheme of things" must therefore be explained in terms of a "lower" cognitive process. The problem is, the

conclusion is incorrect because the premise is incorrect. It is predicated upon an hierarchical relationship that exists only as an error of Western imagination, according to vertical cosmic order in Western origin myth. Both Tylor and Müller were therefore incorrect in equating mythopoeic thought with an archaic mode of "lesser" reasoning. On the other hand, Tylor was correct in his notion that there is an autonomic and unconscious dimension to metaphoric association, and Müller was correct in noting metaphor-reliance, or mythopoetics, in the expression of myth. Where we may all continue to err is in missing the fact that, *if* the Mythopoeic Age does not evidence a lower thought process, then it cannot be an artifact of the remote past. Stated more succinctly, if mythopoeic man was savage, then we are also savage—or if we are not savage, then mythopoeic man was not savage—for we continue to live as ever in the Mythopoeic Age. Our "new" desacralized universe is no evidence to the contrary, for by "continuing reference of point after point to the test of actual example," it was arrived at in the usual cognitive way.

Instead, what appears to be "new" is our emergence from domination by the weather, and other forces in nature. What is indicated is that our perception of the Otherworldly realm changes in response to the worldly one. Hence, whatever may have been perceived in the Stone Age, we find Neolithic, or agricultural features in our later creation myth (gardens, as indicate cultivation, and references to farming and subduing the land, as indicate agriculture) which by definition cannot *predate* the Neolithic Age. The 20th century, sitting squarely in a desacralized, more scientific age, has similarly generated a more suitably scientific, desacralized idea of cosmos.

Ever since Plato purged myths from his Republic—as noted by Christopher Vecsey—only to replace them with his own, Western civilization seems to have come down with an acute case of what Vecsey calls "mythophobia" (1988:5). Upon reflection, symptoms include denying the value of something (eg. sacralized universe) when it is "myth" to us, and denying it is "myth" (eg. desacralized universe) when it is valuable to us. This coy means of looking the other way seems to preserve our self esteem, along a hierarchy that devalues the only thought processes that permit us to know anything about the imperceptible. This bias presupposes that non-imaginary assessment of the way things are is not only possible (as, for instance, when we "know" what we "hear"), but is free of "contamination," and is ultimately desirable, since imagination is supposed to be typically incorrect. Being virtually uninformed, and thoroughly uninformable about how often imagination is correct, while focused on an imaginary vertical hierarchy that devalues imagination and imaginers, this worldview remains unable to employ imagination more creatively in sense-making, and denies that without it, we would often stand frozen in paralysis, staring at the void.

In his phenomenological study of imagination, Edward S. Casey notes that from Aristotle to Kant, imagination's rank was elevated to that of a mid-point mental faculty between sensation and intellect, while Romantics (and later, Surrealists) gave it top billing, only to see it sink beneath their excessive enthusiasm and poverty of intellectual analysis (1976:17,18). Imagination continued to move down the hierarchical scale in the 20th century, possibly in relation to psychoanalytic theory, which classified it as a "sick" or distorted strategy for approximating reality. Recent research in cognitive science, focused on how the species does its sense-making, has identified imagination as an integral and even autonomic component of sense-making, successful enough to facilitate survival of the species. But as Casey comments, "the overall picture remains one of disarray" (1976: 19). Imagination in its own right, and its role in the shaping of cosmos and culture, has not excited researchers. It is evidently not seen as important—or does not rate high enough—on our hierarchy of normal CNS functions, to warrant serious attention. Casey points out (1976:19,20):

Clearly, what is needed is an approach that respects essential, and not merely contingent, differences between mental acts and that attempts to account for each in its own right and without recourse to a preestablished hierarchy of acts. Any such hierarchy is preevaluative in the sense that it determines or expresses in advance, which acts are more, and which less, important. . . If imagining truly differs in kind from other mental acts, then it calls for a careful descriptive account that will permit it specifically to emerge from the confusion and misconception in which it has been so deeply mired in Western thought.

It would appear that the cognitive sciences are releasing us from the more self-defeating aspects of our hierarchical world order, to better understand world orders. Such studies are of particular import to folklorists, because they permit us to know human beings as creators of cosmology, as well as to know their cosmologies, and to explore the relationship for its cultural implications. The research is the more encouraging, for it promises not only to inform us, but perhaps to renew in us a sense of self-worth as imaginers, and to recapture the awe of Lear, in his encounter with a personification of our visionary selves: Gloucester, the blind seer. Gloucester sees not only beyond the limits of our enormously restricted visual perception, but he has the privilege to admit that he does it in the only way it can be done.

Lear: No eyes in your head? . . . yet you see how this world goes.

Gloucester: I see it feelingly.

Shakespeare

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